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Streamlined Forensic Reporting: 'Swift and Sure Justice'?

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The Criminal Justice System Efficiency Program aims to deal 'promptly and efficiently' with 'low-level, straightforward cases', in order to dispense 'swift and sure justice.' To meet these objectives, the Ministry of Justice places a duty on defence solicitors to reduce the 'costs and delay associated with forensic evidence.' It justifies its requirements with reference to the Criminal Procedure Rules, highlighting the need for solicitors to actively manage criminal cases, to take part in pre-trial hearings, and to engage with forensic evidence through a new form of discourse: Streamlined Forensic Reporting (SFR).

The Streamlined Forensic Reporting scheme operates 'by taking a more proportionate approach to forensic evidence through the early preparation of a short report that details the key forensic evidence the prosecution intends to rely upon.' The aim is to avoid the costs associated with thorough forensic analysis by encouraging an early guilty plea. In circumstances where such a plea cannot be elicited, the scheme aims to secure agreement on forensic issues at the earliest stage. It places an obligation on the defence to identify these problematic areas.

Drawing on comparative ethnographic research within the forensic science and criminal justice sectors, this paper questions the safety or utility of these attenuated and instrumental forms of 'efficient' forensic discourse. It demonstrates that streamlined reports are often compiled by non-expert administrators, lack contextual evaluation or technical explanation, and are frequently inaccurate or misleading. It asks whether the veiled and incremental approach to the issue of disclosure forms an adequate basis for proper scrutiny or legal challenge, and questions whether this

scheme, which exhibits a marked ambivalence towards forensic expertise, may ultimately subvert the duty placed on the courts to place forensic evidence in its proper context.

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1. Introduction

The deployment of measures of economic rationalisation across the criminal justice system have led to the introduction of instrumental approaches to the construction of forensic DNA evidence: approaches which dispense with expert scientific evaluation and purposefully limit the amount of contextual information available to the courts. This paper explores the economic discourses which led to the introduction of these procedurally novel - but scientifically attenuated - forms of scientific reporting. It focuses on ‘Staged reporting’, and its successor, Streamlined Forensic Reporting (SFR).

The paper explores the use of SFR1 reporting as an evidential agonist; one which has been deployed in response to perceived shortcomings in the ability of DNA to answer questions which relate to ‘transfer and persistence.’ Further, it explores the way in which expert scientific inputs have been limited by a mode of forensic reporting (and case construction) which aims to foreclose discussion of context. Finally, it considers the implications of the introduction of SFR for the role of the forensic DNA expert.

Discussion is placed in both theoretical and practical perspective. It is demonstrated that these developments can be traced to a crisis of governmentality brought about by a confrontation between scientific expertise and the realities of legal fact-finding: a crisis which precipitated the subsequent restructuring of forensic roles. The paper also demonstrates the way in which scientifically ambivalent forms of reporting carry the potential to contribute to miscarriages of justice at the pre-trial stage, and may ultimately detract from the quality and content of expert scientific opinion, thus affecting the court’s ability to arrive at sound determinations on questions of fact.

2. Background: The Criminal Justice System Efficiency Program

Streamlined Forensic Reporting is an innovative evidential procedure, which was introduced across England and Wales for the purposes of criminal case management, and the construction of forensic evidence. Its stated aim is to minimise bureaucracy, and to reduce unnecessary costs and delays in the criminal justice system. The scheme operates ‘by taking a more proportionate approach to forensic evidence through the early preparation of a short report that details the key forensic evidence the prosecution intends to rely upon.’¹ The objective is thus to avoid the costs associated with thorough forensic analysis by encouraging an early guilty plea. In circumstances where such a plea cannot be elicited, the scheme aims to secure agreement on forensic issues with the defence at the earliest stage. Should such agreement be unattainable, SFR places an obligation on the defence to identify the problematic issues.

The SFR scheme was established throughout England and Wales as part of the Ministry of Justice’s ‘Criminal Justice System Efficiency Program’, which aims ‘to [modernise] the CJS by reducing or removing the movement of paper, and people, around the system.’² The Government White Paper, *Swift and Sure Justice*,³ sets out the objectives of the program:

‘From a so-called ‘system’ which operated in silos, we are moving to a criminal justice service where police, prosecution and courts work more effectively together. None of these reforms will compromise historic legal rights or important principles of justice. Rather the reverse: justice must be swift, sure and seen to be done, or it is not done at all.’⁴

The targets of the reforms are cases which the Ministry of Justice categorises as ‘low-level, straightforward and uncontested...where a quick response is appropriate’.⁵ Such cases are to be dealt with ‘promptly and efficiently’ and, in order to better dispense ‘swift justice’, the CJS Efficiency program seeks to ‘transform criminal justice from a

¹ ACPO, *Communication Strategy – Streamlined Forensic Reporting* (2012)

² Ministry of Justice *Defence Practitioner FAQ*, Version 3.92 (14th May 2012)

³ Ministry of Justice. (2012) *Swift and Sure Justice: The Government’s Plans for Reform of the Criminal Justice System*. (Cm 8388). London: TSO.

⁴ *Ibid.* at p.4

⁵ *Ibid.* at p.5

fragmented, paper-based system to a seamless, digital service.’⁶ In pursuance of these objectives, the program embraces technological innovations, such as the introduction of digital case files, increased use of video technology in proceedings, and the harnessing of social media to communicate with the general public.

The efficiency program also recognises the critical role which forensic evidence plays in bringing offenders to justice. Hence, the Ministry supports the Streamlined Forensic Reporting (SFR) scheme. This scheme was first introduced in 2008, as part of an initiative by the Association of Chief Police Officers (ACPO) Criminal Justice Business Group, in partnership with the Metropolitan Police Service (MPS). It proceeded on the basis of a series of local pilot programs in Streamlined Forensic Reporting. The initial pilot - at Woolwich Crown Court in London - was restricted to cases involving fingerprint identification, firearm and ballistic results, and DNA database matches. For all cases involving these evidence types the forensic science provider was directed to produce a short forensic report. These reports, known as Streamlined Forensic Report Stage 1 (or SFR1), were restricted to initial key findings. The reports were not therefore intended to be presented at trial (being limited in scope, frequently based on an incomplete analysis, and possibly inconclusive). Rather, they were intended ‘to elicit an agreement or to enable the defence to simply identify the real issues for trial.’⁷ In the event that the case went to trial, an extended SFR Stage 2 report was presented, usually in witness statement format.

The evaluation following this year-long pilot found fewer discontinued cases alongside an increase in early guilty pleas and (with attendant savings). As a result, the SFR initiative was extended. By November 2011 it included all London Courts (with the exception of the Central Criminal Court). A second review followed, focussing on cases which had been processed through Wood Green Crown Court before and after SFR implementation. Similar effects to the prior Woolwich pilot were noted:

- Early Guilty Pleas increased from 61% to 84%

⁶ *Ibid.* at p.43

⁷ CPS, *Legal Guidance on Streamlined Forensic Reporting*, Available at: http://www.cps.gov.uk/legal/s_to_u/scientific_evidence/sfr_guidance_and_toolkit/sfr_guidance/sfr_q_and_a/index.html

- Guilty pleas before trial increased from 71% to 87%
- Total guilty outcomes increased from 79% to 91%
- Abandoned trials reduced from 9% to 2.4%
- Additional requirement for forensic evidence reduced from 42% to 2%
- Discontinued cases reduced from 18% to 5%.⁸

At this juncture, the SFR initiative was picked up by the Ministry of Justice (MoJ) Efficiency Program. The MoJ noted the success of the pilot projects, and catalogued the potential benefits, which could be gained from the nationwide introduction of streamlined reporting (particularly with regard to case management). These included:

- A lower risk of discontinuance, likely to be due to case papers being better prepared and the defence being informed of the evidence at the earliest stage;
- An improvement in the early guilty plea rate, resulting in fewer cases coming to trial unnecessarily, helping to ease the pressure of trial dates and associated costs, and;
- A reduction in the number of cases requiring additional forensic evidence, saving time and costs associated with gathering this evidence.⁹

At this stage the CPS reframed the primary objective of SFR in economic terms: specifically, the reduction of ‘costs and delay associated with forensic evidence where such evidence adds no value to the administration of justice.’¹⁰ The CPS then set out to actively promote the adoption of SFR across the criminal justice system, with a target date for implementation by March 2013. As a result of these efforts, streamlined forensic reporting was introduced throughout England and Wales on 2nd April 2013. Initially, the scheme was limited to cases involving forensic DNA matches. However, individual police forces were freed to introduce SFR for other forensic types, on their own cognisance. As a result, SFR is currently being used in cases involving DNA matches, EDIT (Evidential Drug Identification Tests), Simple Drug tests, Simple Toxicology tests, Firearms Classification, Footwear, and IIoC

⁸ *Ibid.*

⁹ Ministry of Justice. (2012) *Swift and Sure Justice: The Government’s Plans for Reform of the Criminal Justice System*. (Cm 8388). London: TSO., at pp. 33-4

¹⁰ This is one of a series of *circulus in probando* deployed in support of the SFR initiative. These are discussed at Section 5.7 (below).

(Indecent Images of Children). There are further plans to extend implementation to include forensic casework.

The SFR implementation process received active support from both ACPO Criminal Justice and the CPS. The national project was led by Neil Rhodes, Chief Constable of Lincolnshire Police (and ACPO TAM Director of Strategy and Policy: SFR). It was developed, in large part, by Karen Squibb-Williams QC (Strategic Policy Adviser, CPS). The SFR governance structure is now dispersed across multiple agencies, including; the Forensics Portfolio Board, Forensics Delivery Board, SFR Virtual National Board, SFR Issues and Consistency Group, and a small number of SFR Expert Networks aligned to categories of SFR evidence (DNA, Footwear, Drugs and Digital). The SFR program also falls within the remit of the Forensic Science Regulator (FSR) and the UK Accreditation Service (UKAS).

3. Criminal Procedure Rules

The second objective of Streamlined Forensic Reporting - as determined by the CPS - is to ease compliance with the requirements of Criminal Procedure Rules (CrimPR). The purpose of the body of Criminal Procedure Rules is to ensure that criminal cases are dealt with justly (as laid out in Part 1¹¹). Reaching just determinations in criminal cases entails, *inter alia*, acquitting the innocent, convicting the guilty, dealing fairly with the prosecution and defence, respecting the interests of witnesses, dealing with cases efficiently, and taking in to account the complexity of the issues at hand.¹²

In order to meet the overriding objective of the CrimPR, Part 3 places a further duty on the court¹³, to actively manage criminal cases. ‘Active management’ is achieved through the early identification of real issues and the early identification of the needs

¹¹ Part 1, *Criminal Procedure Rules 2015*. Ministry of Justice. Note that there is a third - unstated - objective to SFR: streamlined reports have been designed to act as an evidential agonist in cases where the accused exercises his (or her) right to silence (see below). This objective receives relatively little attention in the supporting documentation but carries far-reaching implications for the conduct of criminal cases.

¹² Part 1 CrimPR 1.1(2)(a)-(g).

¹³ Specifically, the Magistrate, and Crown Courts, including Appeals from the Crown Court s under s.3.1(2)

of witnesses.¹⁴ Part 3 also places a duty on the court to ensure that evidence (whether disputed or not), is presented in the shortest and clearest way.

A similar duty is placed on the individual parties under Rule 3.3, which requires that each party must actively assist the court in fulfilling its Part 3 objectives. This entails both parties entering into active communication at the earliest opportunity (and no later than the day of the first hearing) in order to establish whether the defendant intends to plead guilty or not guilty, and - in the latter instance – the parties must determine which matters are agreed, and which are likely to be disputed.

Part 19 (previously Part 33) of the CrimPR places a similar duty on experts to help the court to achieve its overriding objective. This duty is not limited to expert witnesses but extends to all of those experts summoned to prepare evidence for criminal proceedings.¹⁵ The duty is fulfilled by giving opinion which is unbiased, objective, and within the expert's area of expertise. Part 19 also places a special duty on experts to actively assist the court to fulfil its duty of case management under Rule 3.2, in particular by complying with any direction made by the court.

It is clear from the above that the the Criminal Procedure Rules provide a clear rationale for the implementation of SFR, in the absence of direct statutory implementation. Therefore, the SFR objectives must be read as facilitating compliance with the CrimPR. With that in mind, it is worth the CPS state that the second objective of Streamlined Reporting (Stage 1):

‘To provide a stronger basis for Stage 2 forensic reporting through compliance with Criminal Procedure Rules, rules 3.2 and 3.3, which set out the Court Case Management requirements for the early identification of real issues.’¹⁶

The degree to which the SFR program conforms, or departs, from the requirements of the CrimPR will be the subject of detailed discussion below.¹⁷

¹⁴ CrimPR 3.2 (2)(a) and (b)

¹⁵ CrimPR, Part 19.1(2)

¹⁶ CPS, *Legal Guidance on Streamlined Forensic Reporting*, Available at: http://www.cps.gov.uk/legal/s_to_u/scientific_evidence/sfr_guidance_and_toolkit/sfr_guidance/sfr_q_and_a/index.html

¹⁷ See Part 9.

4. Case Law

In addition to citing the need for regulatory compliance, the introduction of Streamlined Reporting is justified with reference to case law. The supporting documentation lists a small number of cases, which are cited in support of the scheme's stated objectives. The CPS have gone so far as to include excerpts from leading cases in earlier versions of the SFR1 form itself, though these have since been removed.

Particular reference is made to *Balogun v DPP* [2010] EWHC 799 and *R v Chorley Justices* [2006] EWHC 1795, both of which are cited in relation to the issue of defence disclosure and the duties owed by both parties to identify the real issues at the earliest opportunity, as laid out in the CrimPR.¹⁸ Support is also drawn from *R v Reed, Reed & Garmson* [2009] EWCA Crim LR 2698, paragraphs 128-131 of which emphasise the importance of adherence to Rule 33 CrimPR (now Rule 19). Further reference is made to *R v Weller* [2010] EWCA Crim LR 724, paragraphs 16-18 discuss identification of salient issues; *R v Butler, Henderson & Oyerderin* [2010] EWCA Crim LR 1269, paragraphs 209-214 on case management; the leading case of *R v T* [2010] EWCA Crim LR 2439 on the duty of expert witnesses to reveal their underlying methodology; and *R v Olu, Wilson & Brooks* [2010] EWCA Crim LR 2975, which deals with the MG Schedules at paragraph 45. These cases will form the subject of further discussion below.

5. SFR and Abbreviated (or 'Staged') Forensic Reporting

It is important for the present discussion to differentiate Streamlined Forensic Reporting from Staged (or 'abbreviated') Forensic Reporting. The SFR scheme was not the first attempt by the CPS to create economically efficient forms of forensic

¹⁸ See Form MG22(b) and Beckwith, J. *Digital Forensics Specialist Group SFR 23rd* September 2014. Available on website of the Forensic Science Regulator.

reporting. SFR was built upon a prior initiative - 'Staged Reporting'¹⁹ – which was introduced by the CPS Prosecution Team in 2004. The Staged Reporting initiative set out 'to minimise unnecessary work and delays by focusing on the matters relevant to the case in question.'²⁰ The Staged Reporting scheme was intended to dovetail with changes to the 'CPS Prosecution Team Charging Guidance' policies, which had not previously allowed a suspect to be charged on the sole basis of a DNA match report. However, that policy changed with effect from 1st August 2004. The guidance states that,

'The new policy will mean that a suspect may now be charged on the basis of a DNA intelligence match, derived from the scene of the crime, and a sample of DNA kept on the National Database providing there is some further supporting evidence.'²¹

The Prosecution Team DNA Guidance also introduced Staged Reporting into the process of criminal case file preparation. As with its direct descendant, SFR, the introduction of Staged Reporting was justified with reference to the CrimPR (in addition to the Criminal Justice Act 2003): in particular, the requirement of early identification of the issues in the case by both the prosecution and the defence, and the increased expectation of robust case management. Under the Staged Reporting scheme,

'an initial abbreviated statement is provided by the scientist simply to confirm the validity of the NDNAD match report, with a full statement only being requested where the actual issues identified require full evaluation...This change provides a significant opportunity to improve the turnaround times for analysis in the laboratories and the provision of statements by the scientists, as well as greatly reducing the costs of forensic science evidence.'²²

The crucial difference between Staged reporting and Streamlined reporting is that, under the Staged Reporting scheme, the forensic report is produced by a qualified

¹⁹ CPS, *Legal Guidance on Streamlined Forensic Reporting*, Available at: http://www.cps.gov.uk/legal/s_to_u/scientific_evidence/sfr_guidance_and_toolkit/sfr_guidance/sfr_q_and_a/index.html

²⁰ *The Forensic Use of Bioinformation: Ethical Issues*, at page 65

²¹ CPS, The Prosecution Team, *Guidance on DNA Charging* 16th July 2004

²² NDNAD, *The National DNA Database Annual Report 2005-2006*, at page 10

scientist, who may appear in court on the strength of the report. In contrast, the Streamlined Report (at least in its most common form, SFR1) 'is not a statement upon which the maker of the statement is necessarily qualified to give evidence.'²³ Further, the staged report comprises 'the headlines of the [scientist's] working out'²⁴ and can easily be elaborated upon.²⁵ Thus, Staged Reporting is comparatively transparent as to its limitations, candid with regard to the need for contextual information, and open about the underlying methodology used and the personnel involved.²⁶ Indeed, the relational nature of scientific evidence is directly addressed by the Staged Reporting process, but may become obfuscated by the SFR process.

Following the introduction of Staged Reporting in 2004, the Forensic Science Service - by that point one of several forensic science providers within a relatively undeveloped market - noted some encouraging trends. During the 2005/2006 financial year the service received 1,887 requests for abbreviated statements in respect of NDNAD match reports. These resulted in 175 requests for a full evaluative (or 'complex') statement. The cost of a full evaluative statement was, at that time, around six times that of an abbreviated statement (£600 and £100 respectively). Prior to the introduction of Staged Reporting, all 1,887 statements would have been fully explicated, at a rough total cost of £1,132,200. Thus, as a consequence of using Staged Forensic Reporting, the financial costs were reduced to roughly £293,700 (£188,700 plus £105,000). This equated to a saving of £838,500 (74%).²⁷

The FSS also noted significant savings in time and resources, resulting from the introduction of Staged Reporting. For example, the time associated with the production of a full evaluative statement (average 6 hours) dropped to one hour in respect of abbreviated statements.²⁸ The Staged reporting scheme led to demonstrable efficiencies and, it should be noted that it subsists: abbreviated reports are still

²³ See CPS 'Streamlined Forensic Reporting Guidance and Toolkit 6' 2015. Available at : http://www.cps.gov.uk/legal/s_to_u/scientific_evidence/sfr_guidance_and_toolkit/

²⁴ Field Research Data

²⁵ In contrast, the streamlined report is opaque with regard to its methods and attenuated in its conclusions, providing no platform for elaboration.

²⁶ Staged Reports contain a Technical Note explaining the scientific procedures used. This is absent from the Streamlined Report.

²⁷ NDNAD, *The National DNA Database Annual Report 2005-2006*, at page 10

²⁸ *Ibid.*

routinely produced by some Forensic Science Providers, and are actively sought by a number of Police Forces in preference to full evaluative statements.

6. Streamlined Forensic Reporting - Outline

Streamlined Forensic Reporting is similar to staged reporting insofar as it attempts to save time and resources. When dealing with DNA profiling evidence, it achieves these aims by presenting only the initial key findings derived from a basic examination of DNA evidence. However, as stated above, there are some notable differences between SFR, and other forms of forensic reporting, which make SFR1 unique. The most significant of these is that, 'SFR1 is not a statement upon which the maker of the statement is necessarily qualified to give evidence.'²⁹

Beyond that, it is difficult to find a coherent description of SFR(1) within the guidance notes³⁰, in the supporting documentation³¹, or on the form itself.³² SFR(1) is, variously described as: 'evidence'; 'a summary of conclusions'³³; 'staged reporting'; 'not staged reporting'; 'an abbreviated form of reporting'; 'information'; 'a forensic statement'; 'not a statement'; 'a forensic report'; 'not a witness statement or an expert's report to which Criminal Procedure Rule 33 applies'; '(proportional) forensic evidence'; 'a summary of forensic evidence'; 'forensic evidence, when agreed, for the purposes of s.10 of the Criminal Justice Act 1967'; 'a vital enabling tool'; 'a key case management tool'; 'a visual prompt to the prosecution and the defence'; and 'a summary of expert evidence that is served for the purposes of securing an admission.'³⁴

Definitions of Streamlined Forensic Reporting are thus diverse, and frequently contradictory. Nor are such definitions fixed, being provisional on both the identity of

²⁹ CPS 'Streamlined Forensic Reporting Guidance and Toolkit 6' 2015. Available at : http://www.cps.gov.uk/legal/s_to_u/scientific_evidence/sfr_guidance_and_toolkit/

³⁰ *Ibid.*

³¹ CPS, *Legal Guidance on Streamlined Forensic Reporting*, Available at: http://www.cps.gov.uk/legal/s_to_u/scientific_evidence/sfr_guidance_and_toolkit/sfr_guidance/sfr_q_and_a/index.html

³² See Appendix.

³³ *Ibid.*

³⁴ Sources: The CPS, Ministry of Justice, HMIC, The Forensic Science Regulator

the user, and the purpose for which the report is used. 'For the police investigator [SFR1] is simply used as the initial forensic report... When SFR enters a pre-trial Court Case Management hearing, it becomes a Court Case Management tool.'³⁵ Thus, SFR1 may be described as a legal chimera designed, not to provide determinative answers, but with the flexibility to serve a multitude of purposes. To better understand its nature, and purposes. it is necessary to focus on the procedure of Streamlined Reporting.

7. Streamlined Forensic Reporting Procedure

As stated above, SFR1 - being insufficiently robust to meet the requirements of a genuine expert witness statement - is not intended for presentation in court. However, it is designed to dovetail with other pre-trial CPS initiatives, particularly the 'Early Guilty Plea Scheme' and the 'Stop Delaying Justice Initiative'. Thus, the report is designed only to provide the bare minimum of evidence necessary for charging purposes, and early court case management hearings. As one forensic DNA expert explains,

‘An SFR1 is done early in a case. Typically it will be done in a ‘spec case’. [The report] is not done by a scientist. The sample goes to the evidence recovery unit [or the Forensic Science Provider]. A profile is obtained. The profile is loaded onto the NDNAD. The police DNA Unit are informed if there has been a match. They compile the SFR1. (DI)³⁶

Forensic scientist’s expressed concerns about the qualifications of those charged with producing Streamlined Reports, as well as the division of tasks between two separate agencies:

³⁵ *Op. Cit.* at n.32

³⁶ All of the informants quoted in this paper are forensic DNA experts and include the following: operational senior scientists, lead scientists, managing director, head of operations, research and development implementation manager, principal forensic biologists and chief reporting officer. They are all currently employed by Forensic Science Providers in England, and together represent a cross-section of the forensic science market, including both Tier 1 and Tier 2 providers. The majority of those interviewed had over ten years experience (often commencing within the FSS). Others had received training within the commercial market.

The work is done by an administrator. The administrator hasn't seen anything but paperwork. She hasn't seen the profiles. And the scientist who created the profile hasn't seen the reference profile and compared it.' (DI)

The 'key findings', as presented on the SFR1, are brief: typically, they may be comprised of only one sentence confirming a match between the DNA sample and the reference profile. The findings are generally not accompanied by any contextual information, nor by a technical note explaining the procedures from which the findings were derived. Crucially, they contain no evaluation or interpretation of the 'evidence'.

On the basis of these findings alone the suspect may be charged. The defence may then be invited to a pre-trial hearing. At the hearing, the key findings will be presented, and the defence may be invited to agree the content of SFR1 – presented as Form MG22 (B) - as an admission of uncontested evidence under Section 10 of the Criminal Justice Act 1967. The accused may also be invited to plead guilty in order to receive the maximum sentencing discount.

In cases where the defence do not accept the content of the SFR1 report during the case management process, the CPS guidance places the onus on the defence to identify 'the real issues'. These issues may then be addressed in court as the subject of an SFR Stage 2 report (MG22 (C)). The SFR Toolkit states the purpose of SFR Stage 2 as being,

'...to provide further evidence on identified and/or disputed forensic issues emanating from the Stage 1 court case management process. Stage 2 forensic evidence provides stronger and relevant forensic evidence to address the specific case issues that have been raised.'³⁷

However, it should be noted that the SFR Stage 2 report is not a replacement for a full evaluative statement. It is limited to a discussion only of those issues derived from the earlier stage of the process. Thus, in practice, the Stage 2 report is frequently replaced with a full statement:

³⁷ CPS '*Streamlined Forensic Reporting Guidance and Toolkit 6*' 2015 at page 7. Available at : http://www.cps.gov.uk/legal/s_to_u/scientific_evidence/sfr_guidance_and_toolkit/

‘You could get an SFR2 as well but normally you would just go for a full witness statement. With an SFR1, you’re going to court without a scientist having seen the report.’ (MB)

When the SFR procedure outlined above is used for the purpose of explicating forensic DNA evidence concerns may be raised. Contrary to popular opinion, DNA evidence does not provide the CJS with a ‘magic bullet’, which holds the power to provide determinative answers. The ‘answers’ - which DNA evidence may or may not provide - are wholly dependent on the questions asked and, crucially, the SFR procedure limits discussion of the DNA evidence to questions of source, and sub-source, attribution. In order to appreciate the serious implications of this procedural limitation it is necessary to embark on a short exegesis in order to discuss the ‘hierarchy of propositions’.

8. The ‘hierarchy of propositions’

The construction of DNA profiling evidence begins at the earliest stage of a criminal investigation. Investigators select particular items of evidence in accordance with their own experience and overarching investigative protocols. Crime scene technicians thereby begin the process of turning the material scene into what Latour labels ‘inscriptions’³⁸, i.e. written traces. Once the evidence has been collected it is stabilized, and moved to the laboratory. The forensic science laboratory acts as a crucible in which evidence undergoes further refinement before being translated into a tangible product for consumption within the courtroom. It is here that source materials are converted into statistical data. This is also the site of conflict between traditional scientific methods, economic imperatives, and regulatory protocols.

Scientific truth claims regarding DNA evidence are currently explicated using Bayesian probabilistic reasoning. Indeed, the Bayesian approach to probabilistic reasoning is now a central feature of DNA ‘casework’. Bayesian reasoning derives its strength from its flexibility, and its capacity to assimilate new facts under fresh

³⁸ Latour, B. & Woolgar, S. (1986) *Laboratory Life: The Construction of Scientific Facts* 2nd Ed. (Princeton: Princeton University Press)

hypotheses. Rather than applying a rigid formula, the forensic scientist - taking into account the surrounding facts of the case – is freed to construct various sets of alternative propositions. Therefore, the construction of propositions under the Bayesian approach is highly dependent on context. Although this approach is designed to promote a balanced view of the evidence (and achieves a degree of transparency in respect of its underlying assumptions) the framing of alternative propositions remains a difficult process. As Cook (1998) states,

‘In practice, the propositions that are addressed will depend on the circumstances of the case, the observations that have been made, background data that is available and the domain of expertise of the scientist.’³⁹

These propositions fall into four major categories, which together form a ‘hierarchy of propositions’: Sub-Source (Level 0), Source (Level I), Activity (Level II) and Offence (Level III). Examples of propositions from these generic classes are given below:

III	Offence	Miss X assaulted Mr Y
II	Activity	Miss X is the person who stabbed Mr Y
I	Source	The blood on Miss X’s clothing came from Mr Y
0	Sub-source	The DNA on Miss X’s clothing came from Mr Y

Level 0 and I propositions are made from observations, measurements and analyses. The prosecution proposition will be determined from a comparison between two samples, and the defence proposition will be determined by considering one of these samples in reference to an external population (such as the National DNA Database, NDNAD).

Level II propositions relate to activities. These too are based on observations, measurements and analyses. However, in order to construct an activity proposition the scientist must take account of the circumstantial framework. The scientist will need to exercise judgement in relation to the construction of Level II propositions and will

³⁹ Cook, R., Evett, I.W., Jackson, G, Jones, P.J. & Lambert, J.A. *A Model for Case Assessment and Interpretation* Science & Justice (1998) 38 151-156 at p. 151

require as much information as possible regarding the circumstances of the case. This will entail some degree of interaction between the forensic scientist and the investigator or prosecutor.

Another notable feature of Level II propositions is that they may be constructed in respect of a complete absence of source material. They might also take into account the possibility of contamination or the manufacture of evidence.

Level III propositions relate to the commission of offences. The forensic scientist, in his capacity, as expert witness, is forbidden from expressing an opinion on the ultimate issue. However, the three generic grades are not rigidly demarcated and it may be possible to construct propositions which approach the ultimate issue without encroaching on the responsibilities of the trier-of-fact.

The ‘case assessment and interpretation model’ was designed around the hierarchy of propositions. It may appear relatively unproblematic when presented in its basic form. However, both its history and practical application reveal some areas of concern. CAI was developed by a management and advisory working group within the Forensic Science Service. The objective of the model was,

‘To enable decisions to be made which will deliver a value for money service meeting the needs of our direct customers and the Criminal Justice System.’⁴⁰

Case Assessment and Interpretation was designed to proceed through three interlinked phases - customer requirement, case pre-assessment and service delivery – all of which are inscribed with those discourses of economic rationality discussed in the opening section: During the first phase (customer requirement) the customer’s needs are determined in relation to economic imperatives. This requires that the scientist open up a dialogue with the customer in order to form an appraisal of the circumstances of the case, the kinds of examinations which can be conducted, and what might be expected from them. The scientist also solicits information with regard to the suspect in order to maintain a balanced view, though this is mediated through the investigative authorities.

⁴⁰ Cook, Evett, Jackson & Jones (1998) at p. 153

An analysis based on Level II (activity) propositions will be of greater use to the customer than a Level I analysis that is confined to source material and may also offer greater value for money. Forensic scientists are therefore encouraged to address their analyses to the highest propositional level possible, stopping short of an opinion on the ultimate probandum:

‘...in some cases the scientist might be able to address propositions which are quite close to the deliberations of the court such as ‘this is the person who murdered the victim’; in other cases it might be necessary to settle for propositions further removed from the ultimate issue such as ‘these fibres came from that garment.’’⁴¹

As the forensic scientist ascends the scale of propositions she must solicit a greater amount of contextual information from the customer. However, the shift in focus from Level I (source) to Level II (activity) propositions may also be viewed as an attempt by forensic experts to claim ownership of the actual process of contextualisation, in preference to lawyers or triers-of-fact.⁴²

‘The probative value of scientific findings depends on the propositions that they are taken to be addressing. If scientists were always to restrict their interpretations to *source* level issues and propositions they would effectively be trusting other criminal justice professionals, or fact-finders themselves, to contextualise the scientific findings and interpret them correctly...It must at least be seriously open to question whether lawyers and courts are currently sufficiently well-informed about the relational nature of scientific evidence or calculations of likelihood ratios to perceive these evidential subtleties, and fully to appreciate their forensic significance, without expert assistance.’⁴³

⁴¹ Cook, Evett, Jackson & Jones (1998) at p. 153

⁴² Thus, with the introduction of CAI, a subtle shift in the balance of power between lawyer and scientist takes place, as the latter ascends the propositional ladder and demarcates an indispensable role for herself within the criminal justice system.

⁴³ Para 2.40 of Jackson, G., Aitken, C. & Roberts, P. (2015) *Practitioner Guide 4 - Case Assessment and Interpretation of Expert Evidence*, Royal Statistical Society's Working Group on Statistics and the Law

The next phase of CAI, case assessment, is seen as a natural extension of the determination of customer requirements. At this point the scientist is required to tighten up the formulation of pairs of propositions in light of the information solicited from the customer, and the latter's requirements. At this point, the scientist is encouraged to document his expectations, these notes forming an integral part of the final written report.

The final phase, service delivery, accounts for the forensic scientist's main examination. Products are commissioned in light of prior assessments, and - following a consultation with the customer - source material is analysed, results are interpreted, and a report is drafted. The fact that the expectations were noted before the examination is carried out is a measure designed to counter any accusations of *post hoc* rationalisation. However, this safeguard is compromised by the recursive, as opposed to linear, nature of the CAI process.

The CAI model, being designed to meet customer requirements, has a strong iterative element. The propositions and expectations laid down in the second phase are subject to review, reframing and modification in light of the results of the material analysis and the availability of new information. The FSS stated that,

‘There are many reasons why both propositions and expectations might change as a result of unexpected developments during the examination. There should be a continuous process of review and, where necessary, further consultation with the customer.’⁴⁴

Evett and Jackson⁴⁵ provide a series of case studies, which illustrate the ways in which mutually exclusive pairs of propositions may be revised and refined in order to take account of fresh contextual evidence. Further, one informant provided an example of the way in which a piece of DNA evidence, which is very strong on the source level, may be neutralized at the activity level:

⁴⁴ Cook, Evett, Jackson & Jones (1998) at p. 153

⁴⁵ Evett, I.W., Jackson, G. & Lambert, J.A., *More on the Hierarchy of Propositions: exploring the distinction between explanations and propositions*, Science & Justice (2000); 40 (1): 3-10

‘If there is no pattern, and it’s only a...bloodstain, and it’s perhaps in the form of a handmark, and the victim’s got a bleeding nose, then suddenly you’re in a situation where you’ve completely neutralised the evidence. (DR)

Problems relating to the lack of reliable data on DNA transfer and persistence are compounded by the increasing sensitivity of DNA-testing protocols, which now regularly pick up results from ‘touch DNA’, shed by (multiple) individuals, and transferred from person to person and between surfaces. The following extended discussion from a field research interview highlights the difficulties posed by ‘transfer and persistence’:

“[When dealing with activity-level propositions] we’re onto ‘how’, ‘where’ and ‘when’. And this is ‘transfer and persistence’. This is the bit that nobody thinks about. Because the SFR said, ‘one in a billion’, and the name of the individual who they got off the database.” (HT)

Interviewer: So much concentration on what you can prove with numbers and just overlooking the simple question of...

JM: ...the question of transfer and persistence....Because nobody’s thinking of this question and, arguably, there’s no real, tenable, useful data on transfer and persistence. So, if you’re provided with a reasonable avenue for DNA, from an individual, to be on something, then it goes into the hat. Because you can’t ‘weight’ transfer and persistence.

Interviewer: It varies from individual to individual as well as...

JM: ...condition to condition, surface to surface, you know, there’s just so many variables that, the fact that they’re his gloves may mean that he’s been wearing them every day and he’s still only a minority contributor...It can pretty much wipe out DNA, that question.

It may be argued, therefore, that ‘transfer and persistence’ issues pose a serious threat to the ongoing utility, and legitimacy, of DNA profiling evidence: a threat which has elicited a creative rejoinder.

9. SFR as a response to ‘transfer and persistence’ problems

The design of the Streamlined Forensic Reporting procedure displays certain features, which could be interpreted as a direct response to the ‘transfer and persistence’ issues raised above. Indeed, the third objective of Streamlined Reporting may be viewed in terms of an attempt to overcome the evidential hurdle posed by such activity-level problems. The SFR supporting documentation goes as far as to state that ‘cases will be built in accordance with the defence account’ as opposed to ‘the defendant building a case around the evidence presented.’⁴⁶ Thus, it may be argued that SFR1 is designed to keep forensic evidence confined to the source and sub-source level. It acts as an evidential agonist: one which is intended to provoke a response. The NPIA are explicit regarding this strategy, which is intended to elicit a response to the production of (sub) source forensic evidence as early as the pre-charge police interview phase:

‘Premature reference to forensic investigative material before an interview may provide the ‘guilty’ suspect with an opportunity to fabricate an explanation to support a claim of lawful access or to give a false account to explain the reasons why the material exists. Innocent suspects should have nothing to fear from material not being revealed, provided they are aware of what is alleged against them. Indeed there will be occasions when it is to the advantage of the innocent person to be allowed to provide a full and uncontaminated account without knowledge of some of the material. Equally, guilty suspects may wish to give a full, honest and uncontaminated account of what occurred because they wish to obtain maximum credit in any later proceedings.’⁴⁷

Thus, the accused is presented with a DNA ‘match’, the onus being placed on the defence to proffer exculpatory information on the activity level.

Nonetheless, forensic practitioners remain skeptical regarding the level of information provided on SFR1, which may form an insufficient basis for any coherent discussion between the parties.⁴⁸ There are also concerns regarding the degree to which the

⁴⁶ *Op. cit.* at n.37

⁴⁷ ODIS: *Optimising Detections In Science*, Disclosure v0.3, NPIA (National Policing Improvement Agency), 2011 at p.2

⁴⁸ See findings below.

defence may be aware of the serious limitations of the forensic evidence adduced, when presented with (sub)source attributions in SFR1 format (see below).

The dramatic increase in the sensitivity of DNA profiling systems raises further concerns. High sensitivity now enables scientists to construct DNA profiles from very small quantities of ‘touch’, or low template (LT), DNA. However, that same sensitivity entails that samples routinely produce ‘mixed’ profiles containing the DNA of two, or more, individuals. It can become overwhelmingly difficult to deconvolute samples in order to differentiate ‘signal’ from ‘noise’, and thereby arrive at sound determinations of questions of fact. Such deficiencies place further strains on the SFR process. Thus, it may be argued that analytical problems (associated with the allocation of limited resources) may in turn be aggravated by extraneous technological, procedural, and physical factors, all of which can increase the cost and complexity of a forensic analysis, itself of questionable probative value.

10. The rhetoric of Streamlined Forensic Reporting

The Streamlined Forensic Reporting scheme has not been placed on a statutory basis. Therefore, attempts both to ground it in law, and to signal legitimacy, have relied upon the selective incorporation of quotes from leading cases, alongside endorsements from high-status members of the legal profession. The earlier versions of the SFR1 form were notable for the inclusion of the following exhortatory and cautionary excerpts from Appeal Court cases:

Balogun v DPP [2010] EWHC 799: Leveson LJ: ‘For my part, I do not accept that the spirit or letter of the Criminal Procedure Rules is complied with by asserting that the Crown is put to "strict proof"’

R v Chorley Justices 2006 EWHC 1795. ‘If a defendant refuses to identify what the issues are, one thing is clear: he can derive no advantage from that or seek, as appears to have happened in this case, to attempt an ambush at trial. The days of ambushing and taking last minute technical points are gone.’

These were accompanied by an extract from an open letter by Goldring, LJ, endorsing the SFR process:

‘SFR has high-level, national support. It is supported by the country’s Senior Presiding Judge, Lord Justice Goldring: “In short, everything suggests that SFR can deliver significant benefits to the courts, prosecution and defence. Court time is saved. Unnecessary forensic work is avoided. The defence are better able to focus on the real issues and appropriately advise their clients.”’⁴⁹

These (obiter) statements are cited in order to imply that a duty of candid disclosure rests with the defence. Such a duty is indeed carried by the defence, in some instances. However, the Criminal Procedure Rules place a countervailing duty of candour on the prosecution, and require both parties to work together to identify the real issues.⁵⁰

*R. v Reed, Reed and Garmson*⁵¹ is also cited in supporting documentation as authority for the assertion that both parties must identify areas of agreement and disagreement within experts’ reports. It concerns itself with the regulation of the conduct of parties with regard to expert witnesses under Rule 33 (now Rule 19) of the CrimPR. However, it is questionable to what degree this applies to SFR1 reports, given that these are not *expert* witness statements.

There is a further aspect of the *Reed* judgement, which may have a direct bearing on the use of Streamlined Forensic Reports. *Reed* states unequivocally that the real issue when dealing with DNA evidence is not ‘whose DNA it is’. The issue is ‘how did it get there.’ Given the persuasiveness of this judgement, it is difficult to see how a form of reporting which purposefully avoids discussion of forensic DNA evidence on the activity level can be said to be of any utility when attempting to focus on the real issues. It is, arguably, for the purposes of the Criminal Procedure Rules, an investigative *cul-de-sac*.

Further, the supporting documentation states that SFR1 may be used to provoke further discussion. However, it could be argued that such a veiled and incremental approach to the issue of disclosure in criminal investigations runs contrary to both the

⁴⁹ Letter from Goldring, LJ (August 2012), available at: <http://www.cps.gov.uk/legal/assets/uploads/files/Senior%20Presiding%20Judge%20regarding%20SFR%20-%20August%202012.pdf>

⁵⁰ Criminal Procedure Rules Part 3

⁵¹ *R v Reed, Reed & Garmson* [2009] EWCA Crim LR 2698,

Practice Directions and the ‘spirit and letter’ of the Criminal Procedure Rules alluded to in *Balogun*.

As stated above, Part 3 of the Criminal Procedure Rules places a duty on the court to ensure that evidence (whether disputed or not), is presented in the shortest and clearest way. The SFR guidance and supporting documentation justifies both brevity and clarity with reference to this rule. However, it is debatable to what degree brevity and clarity can be conflated. During field data collection many informants expressed the view that the ‘evidence’ communicated on the SFR1 form is disproportionately brief, and hence unclear. Indeed, excessive brevity may be especially problematic when dealing with expert scientific evidence, which is relational and highly dependant on context. To force experts to jettison context may be to ignore the needs of witnesses contrary to the Criminal Procedure Rules 3.2 (2)(a) and (b). The SFR1 procedure may sidestep such a duty by ensuring that it is not the scientist – but rather the (non-expert) compiler of the report – who is called as a witness. Again, it is difficult to see how such an approach, which may lead to the obfuscation of the real issues, can be reconciled with a candid exploration of the genuine issues: an exploration which adheres to both the spirit and the letter of the Criminal Procedure Rules.

It may also be argued that the underlying reasoning, which informs the Streamlined Forensic Reporting, is flawed. When attempting to justify the process, the SFR documentation resorts to a series of *circulus in probando* (instances of circular reasoning)⁵². Indeed, it may be argued that the purpose and objectives of the SFR process are based on a series of logical fallacies:

‘[The purpose of SFR Stage 1 is to] provide a stronger basis for Stage 2 forensic reporting through compliance with Criminal Procedure Rules....’⁵³

⁵² Circular reasoning is a form of logical fallacy in which the premises of a syllogism are as demanding of proof as the conclusion. It may be argued that the use of such forms of reasoning as the basis for policy decisions is a striking feature of neo-liberal ideology, given that neo-liberalism is, in itself, ‘a political project that attempts to create a social reality that it suggests already exists.’ See Lemke, T. (2002) *Foucault, Governmentality and Critique*. Rethinking Marxism Vol.14, Issue 3 pp.49-64

⁵³ CPS, *Legal Guidance on Streamlined Forensic Reporting*, Available at: http://www.cps.gov.uk/legal/s_to_u/scientific_evidence/sfr_guidance_and_toolkit/sfr_guidance/sfr_q_and_a/index.html

‘To reduce costs and delay associated with forensic evidence where such evidence adds no value to the administration of justice.’⁵⁴

‘Not guilty files and contested cases are to be built according to real issues.’⁵⁵

‘An improvement in the early guilty plea rate resulting in fewer cases coming to trial unnecessarily.’⁵⁶

‘[SFR] is a two stage process of which the purpose is to deliver forensic evidence proportionate to the needs of the real issues in each case.’⁵⁷

The above examples are notable for their sharing of a common assumption that the ‘real issues’ may be easily identified; that both the legal arguments - and the procedural outputs - derived from of an incomplete and non-probative form of forensic analysis, are sufficient; and that the system is self-proving. It may even be argued that a degree of unwarranted pre-judgement drives the SFR process. See, for example, the following extract taken from the SFR Toolkit, which addresses the ultimate probandum.

‘Where the forensic evidence *proves* the charged person’s involvement in an offence, SFR 1 should always be included with the Initial Details of Prosecution Case (IDPC) [emphasis added].’⁵⁸

Given the above, it may be postulated that the SFR process is based upon streaming, rather than streamlining. Concerns regarding the categorization of cases are outlined below.

11. Field Research Data on Streamlined Forensic Reporting

⁵⁴ *Ibid.*

⁵⁵ Beckwith, J. *Digital Forensics Specialist Group SFR* 23rd September 2014. Available on website of the Forensic Science Regulator.

⁵⁶ Ministry of Justice. (2012) *Swift and Sure Justice: The Government’s Plans for Reform of the Criminal Justice System*. (Cm 8388). London: TSO. at page 34

⁵⁷ CPS, *Legal Guidance on Streamlined Forensic Reporting*, Available at: http://www.cps.gov.uk/legal/s_to_u/scientific_evidence/sfr_guidance_and_toolkit/sfr_guidance/sfr_q_and_a/index.html

⁵⁸ CPS ‘*Streamlined Forensic Reporting Guidance and Toolkit 6*’ 2015. Available at : http://www.cps.gov.uk/legal/s_to_u/scientific_evidence/sfr_guidance_and_toolkit/at page 10

During the field data collection phase, semi-structured interviews were conducted with forensic DNA Scientists representing both Tier 1 frontline providers and Tier 2 defence-oriented FSPs. The majority of those interviewed had over ten years of experience, in many cases having commenced their careers with the FSS. Others were trainees who had recent experience of marketised forensic production. In addition to forensic DNA experts, interviews were conducted with legal practitioners (solicitors, judges, advocates and QCs), members of the CPS (including the Strategic Policy Unit which developed the SFR system), Her Majesty's Inspectorate of Constabulary, the United Kingdom Accreditation Service, and other associated professionals. During the data collection phase, an overwhelming majority of scientists expressed a desire to discuss Streamlined Forensic Reporting. One scientist was particularly interested in the continued utility of abbreviated statements, and produced a Home Office internal memo from 2013, which explained the difference between abbreviated statements and SFR:

‘So the management driver, or the financial driver is there to have a significant difference in between an abbreviated statement and a full statement. However, to serve the court and to be fair to the defendant, that defendant has to know, because I mean the purpose of this is, if it's, you know, overlaps a little bit with the SFR, it is to identify those issues up-front. So, for me, I think the defendant needs to have full visibility of what the evidence is that's against him, what that has been based on, exactly what the findings are, and that disclosure has to be available for that person, but then, as I say, also there needs to be a clear difference between an abbreviated statement and a full statement.’ (PT)

When asked about the SFR process, the majority of scientific informants tended to be critical, citing the lack of information provided on SFR1 reports as being a particularly problematic feature. Deficiencies were noted in terms of both the procedural form, and scientific content, of the reports. The majority of expert informants were skeptical as to the stated aims of the SFR process i.e. encouraging discussion and focusing on the ‘real issues’:

‘...it's designed – let's be honest – to encourage a plea.’ (DI)

‘SFRs were meant to standardise reporting. They were supposed to save time and money by simplifying the process and to highlight areas of disagreement.

They are meant to encourage an early guilty plea.’ (KB)

‘There is a big push for a guilty plea - it’s really like a commercial negotiation. A guilty plea saves a huge public spend.’ (SS)

A lack of information with regard to the ‘chain of custody’ was also cited as a particular source of uncertainty and confusion:

‘On the SFR there is no mention of the lab who did the work or what scientist did it.’ (DI)

‘In one case different swabs went to two different firms.’ (SS)

‘In another case different swabs went to different reporters with a different URN⁵⁹. So again there was a loss of context. The Met may have an overview but not at the raw data level.’ (DR)

These examples, from forensic scientists working in ‘defence-oriented’ (Tier 2) laboratories, reveal procedural concerns arising from tensions between the reviewing laboratory and the police, as well as with those who carried out the initial analysis.

One scientist drew attention to a more specific example of procedural irregularity. This involved the comparison of DNA samples with ‘expired’ reference profiles, in contravention of the overarching regulations. The scientist viewed this as essentially an interpretative - rather than a procedural - lapse.

‘Pre-2005 barcodes reflect DNA1 and DNA2. We are now onto 93... but barcodes beginning 95... or below need a second sample to be taken. They’re no longer allowed to be used in court yet they are slipping through. These are factual errors.’ (DI)

Another scientist indicated that source-level attributions were being presented on the basis of sub-source analysis, revealing a further way in which fact determination may be negatively affected by procedural mechanisms.

⁵⁹ Unique Reference Number

‘With SFRs there’s no record of where the swab was taken from. They swab a stain then state that the DNA came from blood but they haven’t done the KM⁶⁰ test so we can only say that it’s biological material.’ (MB)

‘The danger is that the division between the stain and the DNA result means that one may not be related to the other. There’s no context.’ (SS)

Informants were asked whether the deliberate separation of tasks between the analysis of the sample and the compilation of the report represented a particular form of ‘case fragmentation’. Their responses were illustrative of the degree to which organisational choices could affect scientific enquiry and fact determination.

‘Many police forces have an in-house team called the Evidence Recovery Unit. So, for the Met, the ERU send the recovered samples to LGC or Cellmark. They profile them and send the results back on a results table. The Met scientist hasn’t seen the actual result or the reference sample.’ (PT)

‘The Met may collect samples, process some in-house, send others to an FSP, with nobody getting an overview. The work becomes less interpretative.’ (DR)

‘With the Met lab, one scientist is simply quoting another scientist, and that is not necessarily made clear.’ (SS)

Quoting between scientists was highlighted as a particular problem, especially where one scientist lacked relevant expertise. A defence scientist produced a case file, which contents demonstrated the ways in which separation of tasks, quoting, and incorporation of passages between reports may mislead as to the quality and provenance of the report:

‘So, this individual [indicating the original examiner] has not had DNA experience... and talks about ‘the sample that *we* submitted for DNA’. She understands that a mixed DNA result was obtained, which had at least three people in it ... so, she’s essentially paraphrasing the wording from the original scientist. This result, this statement, doesn’t give us any context on the strength

⁶⁰ Kastle-Meyer presumptive test for blood.

and limitations of this DNA result. It just basically cuts-and-pastes from the scientist's statement.' (SJ)

'So, they're now trying to develop a procedure where the Metropolitan Police can use the reports, or the outputs, of the DNA scientist and can incorporate that into their statement. But, by any other name, that's hearsay.' (DR)

Informants were asked whether the SFR process was affected by the increased sensitivity of analytical protocols, and a resulting increase in the delivery of mixed profiles. They indicated that the interpretative process had become regulated and reduced to a formulaic procedure in which outputs were interpreted according to a rigid, tabulated, administrative procedure.

'Where there is a major/minor sample, the scientist is not able to compare the two samples. The administrator has a table which s(he) consults. So the report is often factually inaccurate with regard to match probability.' (DI)

Discussions with DNA experts tended to revolve around the loss of expert evaluation and interpretation in the SFR process and the concomitant loss of contextual information.

'The NDNAD was never designed to be an evidential tool. The use of SFRs mean that some [defendants] are cornered. The SFR statement is portrayed as facts and [the defendants] aren't fully informed that they aren't facts.' MB)

'SFR1 is all factual and reads in a way that sounds very bad for the accused but it lacks context.' (SS)

'You are asking someone to plead on the basis of incomplete information. Even if it is complete, nowhere does it tell them about the limitations of the evidence. It's a one-size-fits-all solution.' (KB)

Informants also indicated that, based on their experience, a complete absence of contextual or explanatory information made the SFR1 difficult to challenge. Comments supported a view that SFR dovetails with a prosecution strategy: one which seeks to establish links on the sub-source and source level whilst foreclosing discussion of exculpatory information on the activity level.

Interviewer: And would you say the SFR presents things in a very factual way due to the lack of contextual information?

‘Absolutely. Cannot agree more. And in fact, there’s obviously a very strong cohort of individual scientists usually, who feel that they’re misleading because a) they don’t allow a scientist to talk about the context because they’re very formulaic and b) they don’t provide any sort of context to the findings. (DR)

‘depending on how that’s put in interview, there’s such a massive preconception in the general public about what DNA evidence means, whether it’s fair to the defendant to just put that to him or her and how open that is left to them to contest it and realise what it does actually mean and what options they’ve got at that point.’ (PT)

‘Yes. Because there is not technical note and so little information, it’s very hard to challenge. A lawyer wouldn’t know what to challenge and a defendant couldn’t get the funds to challenge it.’ (MB)

‘SFR1 works well for ‘volume crime’ but where do we draw the line? There’s a grey area. Vulnerable individuals may plead guilty on the strength of the SFR1 and these may never be picked up. Especially where they are on legal aid.’ (DR)

A unique feature of SFR procedure is the restructuring of forensic identities, particularly the attempt to replace scientific expertise with technological proficiency and administrative regulation:

‘Nobody knows their roles when it comes to SFRs.’ (KB)

‘The police are directing scientists to do a basic task but there’s more to interpretation than numbers. The problem isn’t limited to the police. The lack of awareness about SFRs among solicitors is a worry.’ (SS)

‘...it must be difficult for a defence lawyer, perhaps, to themselves understand the technicalities or maybe even to get, to be able to get the legal aid, to then, you know, to challenge it because there’s just so little there. So how do you explain what they want?’ (PT)

‘With SFRs they’ve taken the expert out of the process. Previously, the expert had an overview. Now, its only when the defence gets it that we have the necessary overview.’ (FE)

‘So, yes, as I say, I think the purpose of them and why they’ve come about is for very good reasons but because of the lack of understanding of all of the stake holders in it that’s where it falls down. And isn’t fit for purpose necessarily.’ (PT)

Informants were asked whether the scientific input into the SFR process delivered status rather than scientific method. In short, whether the CPS are relying on the reputation of DNA rather than the science of DNA?

‘They are relying on the reputation of DNA but with none of the science underpinning it.’ (DI)

‘If its purpose is to identify at an early stage the issues which are going to be contested, it needs to contain, all of the issues which could possibly be contested, which isn’t necessarily the stat attached to the DNA profile. And there is that pre-conception amongst the general public that DNA is fact [probative]...and so for a defence scientist to say, well I know you’ve got this big number on your SFR1, but I want to look at it more closely but then the budget holder for the legal aid says well it’s DNA, what are you going to contest? (PT)

In summing up their views on the SFR process, informants expressed the view that it was potentially misleading and did not deliver the efficiencies that are its stated aim:

‘The idea behind it, I can understand entirely and yes and I think, you know, the purpose is noble, and it’s fine to try and achieve that, but it’s entirely dependant on everybody’s in the process’ understanding of the purpose of that document and what it means, and what the flaws in that is, and I think where there is a lack of understanding, which the defendant is not likely to have, then that’s where it falls down.’ (FE)

‘The SFR model is good but that model dictates there’s going to be an error rate, and how do we mitigate that? At some point [in the design of the process] it has been accepted there will be a significant error rate.’ (MB)

‘The cost to the court is excessive as a host of reporters get called to court so the cost to the criminal justice system actually increases.’ (DI)

‘SFRs reduce time but the styling is very misleading. There’s a dilution effect.’ (DR)

‘There is a long way to go before SFR is safe.’ (SS)

12. Theoretical Analysis - Autopoiesis

The objectives of Streamlined Forensic Reporting, as stated by the Ministry of Justice, refer to the need to move beyond a ‘so-called system which operates in silos’ towards an effective multi-agency partnership. This impulse to reconcile the truth claims of agents from competing disciplines, each grounded in its own epistemological traditions, resonates with the autopoietic theoretical perspective.

Autopoietic theory proposes that society is made up of a number of self-contained sub-systems, each of which is cognitively open to its environment but normatively closed. The consequence is that only cognitive data can enter the legal system, whose binary coding (lawful/unlawful) allows it to filter resonant stimuli without ever being aware of the nature of the information that exists within, for example, the forensic scientific sub-system.

Therefore, any attempt to investigate law’s interactions with expert truth claims from an autopoietic perspective will concern itself with the way in which the legal sub-system filters forensic scientific communications and reconstructs them according to its own logical imperatives. The Streamlined Forensic Reporting scheme provides an opportunity to explore an instantiation of legal autopoiesis, particularly the ways in which certain non-legal discourses are deemed capable of reproduction within the legal sub-system, whilst others are disqualified. Thus, autopoietic theory may shed light on the nature of the relations between the filtering processes and the epistemic authority of competing discourses.

In conducting such an analysis, the focus of inquiry must converge on the structures and processes that govern interactions between law and the discourses of the forensic scientific sub-system. It should be noted that these autopoietic discourses are marked by ‘semantic closure’, such that the sub-systems to which they correspond share no substantial or teleologic rationality: a discourse emanating from a competing subsystem must function as a text congruent with the semantics of the legal sub-system in order to register as a *perturbation*. Only then will it manifest itself as a stimulus capable of triggering a response. The criterion for successful entry into the legal sub-system is the ability of an external discourse to create internal resonance. Once resonant events in the external environment ‘enter’ the domain of legal communications (by means of simulacra created within the system environment) they are inevitably transformed or reconstructed by the legal sub-system in ways that allow for conversion into events recognisable as legal communications. Further, the recursive application of these ‘internally constructed externalities’ allows for the creation or confirmation of rules to govern further reconstructions of similar events.

As soon as the relationship has been established between law and events in other systems, the way is open for the coupling to continue and for future events in the social world of a similar nature to automatically give rise to shadowing within the legal system. In the language of autopoietic theory, a *perturbation* in the social environment which enters the meaning-system of law, creates a *structural coupling* at the point of perturbation between law and any other systems, both social and psychic, involved in generating the perturbation. From this moment, developments within non-legal sub-systems are coupled to parallel but independent developments in the legal system through linkage institutions that bind law to diverse social discourses.

Structural coupling is but one example of a variety of processes that bind law to diverse social discourses. Alternative outcomes are possible, dependent on the interaction of elements and system processes (emergence, interference and interpenetration). The ‘transformational grammar’ of the interactions between the legal and forensic sub-systems, provides a good example of structural coupling. However, that does not adequately explain the way in which the instantiation of expert witnessing known as Streamlined Forensic Reporting governs the creation of legal truth claims. SFR utilises specific rules and constraints as well as employing particular connections, which govern selectivity and filtering. In order to better

understand the ways in which distinctive discursive outcomes may be attributable to the unique features of Streamlined Reporting, it is necessary to discuss the role of meaning and power in autopoietic theory.

As noted above, the legal sub-system is cognitively open but normatively closed. Thus, it is for the legal sub-system to impart meaning onto those messages that resonate with the binary coding lawful/unlawful. Crucially, the meaning of a message depends on the context of the message i.e. the set of possible messages from which it is selected. Since the context of a message cannot be communicated or directly observed, the meaning of a message is always inferred by the (legal) observer. Inferences with regard to the meaning and context of forensic knowledge imparted by Streamlined Reports are shaped through a reductive process, which constrains the set of possible messages, from which the content of the report is selected, to a further binary: match/non-match. As King states,

‘The normative communications of other systems cannot simply be reproduced by law as legal communication. They first have to be reconstructed as law if they are to become accepted as law, and this reconstruction process may well give rise to unforeseen distortions and reductions to the meaning of the original communications as they were formulated in [other] systems.’⁶¹

Thus, the SFR scheme provided the means for the reformulation and reconstruction of forensic discourse, at the point at which that discourse threatened to import a penumbra of ‘unhelpful’ meanings and contextual choices. Such a view is predicated on the existence of a differential power arrangement between competing sub-systems.

Although autopoiesis does not address hierarchical or hegemonic issues as directly as other theoretical perspectives, it nevertheless takes account of inequalities of power, and domination of one sub-system by another. As King states,

‘the relationship between social meaning systems is not necessarily one of equality. Although it is theoretically possible for each social system to reconstruct every other system according to its own procedures and to attribute its own meaning to that system, those systems which are widely accepted as

⁶¹ King, M. *The Truth About Autopoiesis* (1993) *Journal of Law and Society* Vol. 20 No.2 at page 466

defining meanings for the whole of society are in a much more powerful position than others.’⁶²

Such is the possible degree of refraction across discrete sub-systems that it is possible to speak of ‘the enslavement’ of the knowledge of one meaning system by another.’ This is particularly true of interactions involving economics, politics, science, and law and may account for the reformation of scientific discourses through procedural means, of which the SFR process is an example. This need not imply that the scientific sub-system is prevented from asserting an alternative meaning to forensic information, which recognises alternative contextual options:

‘It is always possible for the less prevalent systems to insist on their own self-constructions and indeed to reconstruct successful meaning systems according to their particular procedures and reality versions. The problem these weaker systems face, however, is to convince society, the world of social communications, to accept their versions of reality in preference to those of the more prevalent.’⁶³

Central to law’s reconstruction of the social world is the way in which law reconstructs people – including forensic scientists - ‘as semantic artifacts of the legal system’, in ways which reflect existing power relationships and enhance the self-reproductive potential of the legal sub-system. The reconstruction of forensic identities is central to this process and will be the subject of the final section.

13. Theoretical Analysis: Governmentality and the restructuring of forensic identities

Commentators have tended to view law and forensic science as operating in silos. This fits with a narrative in which improved communication, and an understanding of each other’s needs, may lead to positive creative tension and the co-production of knowledge. However, what is revealed by observation is the co-option of scientific processes, the reformation of forensic roles, the recreation of forensic identities, and

⁶² *Ibid. at p.467*

⁶³ *Ibid.*

the instrumental use of technology to add scientific status to a process of legal fact-determination. These observations can be explained with reference to the processes of economic rationalisation. However, it is necessary for the purposes of this paper to develop a more nuanced understanding of the developing nature of rationalizing processes.

Scholars of marketisation, and those who chronicle its effects, have hitherto been content to base their analyses on a relatively fluid understanding of the concept: one which has been used across many domains, to many ends, and is frequently accompanied by ‘considerable imprecision, confusion and controversy.’⁶⁴ Garland argues that rationalising processes,

‘...lack a strict logic or tight conceptual structure. Rather, [they form] a ragbag of techniques, models, analogies and recipes for action that are loosely bound up together by their appeal to economic rationality.’⁶⁵

Both Lawless and Williams adopt Garland’s perspective in their explorations of the forensic science market.⁶⁶ It is postulated that their approach may be of limited utility, and that it is no longer sufficient to view economic rationalization as a mere ‘ragbag of techniques’. Rather, it is possible to discern distinct patterns of development exhibited by processes of economic rationalisation, which may appear merely tactical in emergent phases, but which are comparatively instrumental in the more developed stages. Thus, contemporary neo-liberalism differs in significant ways from its Thatcherite precedent, and those studies of the forensic market which do not account for the process, as it is witnessed in its more developed stages, are outdated.

For example, Lawless and Williams addressed the relationships between the legal and forensic fields, exploring how they ‘combine in a mutually constitutive relationship to

⁶⁴ Brenner, N., Peck, J. & Theodore, N. *After Neoliberalization* Globalizations, September 2010, Vol.7, No.3, pp. 327-345

⁶⁵ Garland, D. *The Culture of Control* (OUP: Oxford, 2002) at p.190

⁶⁶ Lawless, C. (2010). *A Curious Reconstruction? The Shaping of ‘Marketized’ Forensic Science*. CARR Discussion Paper 63; Lawless, C.J. & Williams, R. *Helping With Inquiries or Helping With Profits? The trials and tribulations of a technology of forensic reasoning*. *Social Studies of Science* (2010), 40, 731-755

(in)form a mode of production of scientific commodities purchased by the police in support of criminal justice objectives.⁶⁷ According to them, commercialisation is a strategic goal, pursued in order to further 'neoliberal market-oriented sensibilities'.⁶⁸ Hence, their focus on customers and suppliers, productisation, and service delivery.⁶⁹

Marketisation has disrupted techno-social 'expert' networks, to be sure, but the purpose of such disruption is to render scientific expertise open to economic rationalization and to reform the roles and identities of the individual forensic experts who comprise these networks. Market rationality restructures organisations in a way which renders their boundaries porous and renders processes more amenable to instrumental policies, but with the strategic goal of restructuring people.⁷⁰ Thus, productisation and marketisation are merely examples of the reformation of processes, conditions, and mechanisms, which are necessary precursors to the readjustment of attitudes and behaviours.

The ambivalence shown towards forensic expertise by the Streamlined Forensic Reporting scheme may appear paradoxical from an orthodox perspective, given the central role of scientific status in the co-production of legal knowledge. However, this jettisoning of expert inputs can be explained. Forensic expertise is necessary in the early stages of market development, during which the legal system borrows from the rhetoric of expertise and scientific superlativity. In the latter stages, the legal system confronts a crisis of governmentality brought about by a confrontation between scientific experts as key personnel and the realities of legal fact-finding. However, evolving institutional arrangements allow for the restructuring of forensic identities in accordance with the needs of the legal system, as described above:

'That's another difference between here and the FSS because we used to have a tripartite agreement between the forensic science provider - the FSS - and the police and the CPS and I think we've lost that link with CPS now. There's very

⁶⁷ Lawless and Williams (2010)

⁶⁸ *ibid* 732

⁶⁹ Daemmrich, A. *The Evidence Does Not Speak For Itself: Expert witnesses and the organization of DNA-typing companies*. *Social Studies of Science* (1998), 28, pp. 741-772

⁷⁰ See Foucault, Michel (1997). *Society Must Be Defended: Lectures at the Collège de France, 1975-1976*. New York, NY: St. Martin's Press. pp. 243-244.

little input. Instead of having this triangle where we're all talking to each other I feel like we're behind the police, and the police will then talk to the CPS.' (PT)

14. Conclusions

This study demonstrates that a strong link exists between the introduction of measures of economic rationalisation and a reduction in the thinking time available to the forensic scientist. This limitation constrains the process of contextual investigation that is essential to the Case Assessment and Investigation process. These restrictions have been aggravated by a marked tendency to triage cases prior to forensic investigation, and by systematic attempts to limit activity-level DNA profiling analyses.

The study also exposes significant problems related to the 'de-skilling' of those forensic-scientific actors responsible for the construction of DNA profiling evidence. The study supports the view that the ultimate goal of the economic rationalisation of forensic expertise has been to disrupt, and reform, the attitudes and expectations of forensic science providers, and to reconstruct forensic identities, in order to realign these with the economic goals and perceived needs of the investigating and prosecutory authorities. This disruption of techno-social expert networks has largely been achieved through the instrumental use of novel forms of forensic procedure, of which Streamlined Forensic Reporting is the most extreme example. The study also demonstrates that scientifically-ambivalent forms of reporting carry the potential to significantly diminish the quality, and content, of expert scientific opinion and may ultimately affect the courts' ability to arrive at sound determinations on questions of fact.